

FIG. 1

type	-310	-300	-290	-280	-270	-260	-250	-240	-230	-220
HCV 1 1a	CCACCATGAATCACTCCCTGT	GAGGAAGCTCTT	CA	CGCAGAAAGCTCTAG	CCATGG	CGTTAGTAT	GAGTGT	C	GTCAGCCT	CCAGGA CCC
HCV J 1b	-----AG-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

HC J6 2a	-----G-----	-----C-----	-----	-----	-----	-----	-----	-----	-----	-----
HC J8 2b	-----G-----	-----C-----	-----	-----	-----	-----	-----	-----	-----	-----

BR56 3a	-----AG-----	-----T-----	-----G-----	-----C-----	-----	-----	-----	-----	-----	-----
E-b8 3a	-----AG-----	-----T-----	-----G-----	-----C-----	-----	-----	-----	-----	-----	-----

Z6 4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

FIG. 2A

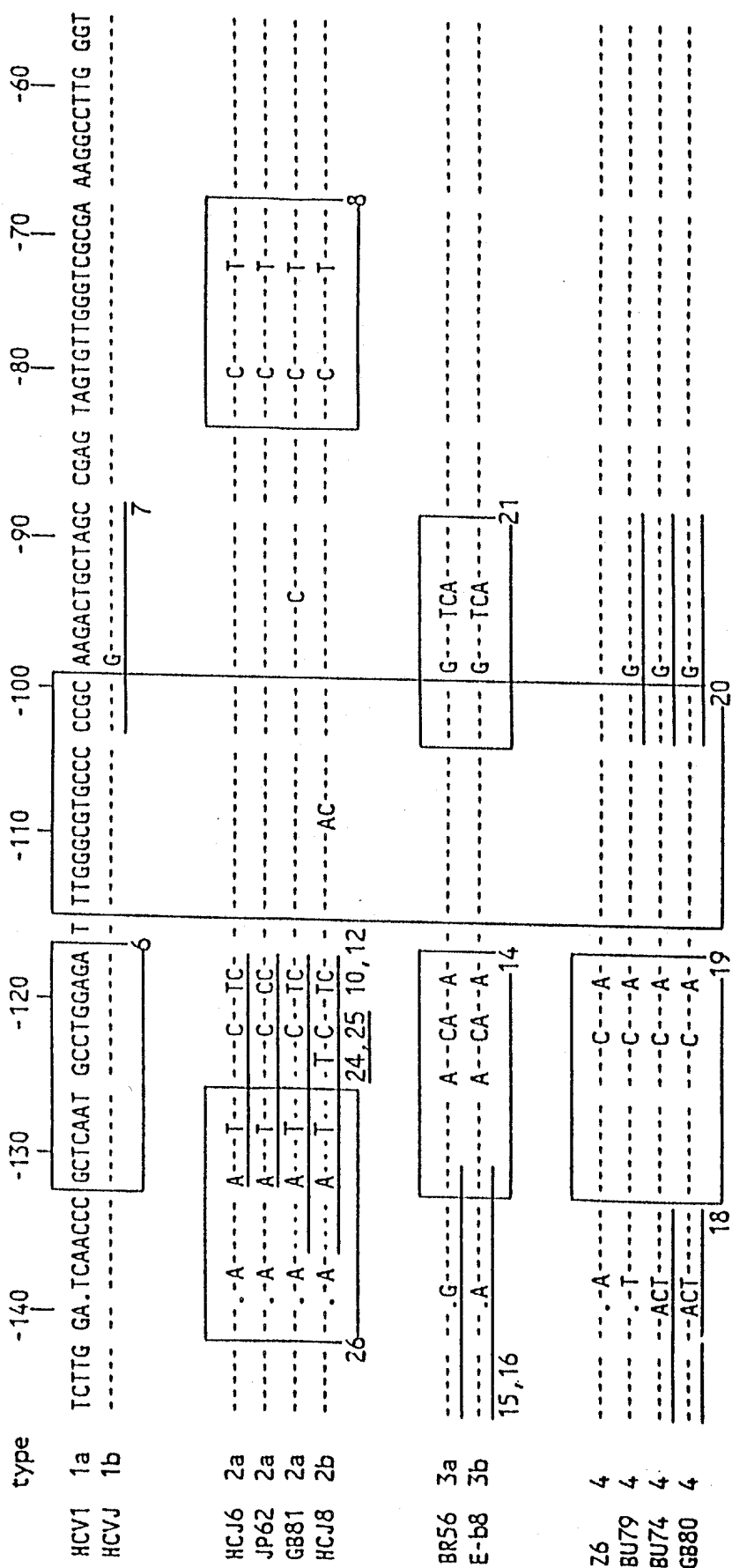


FIG. 2B

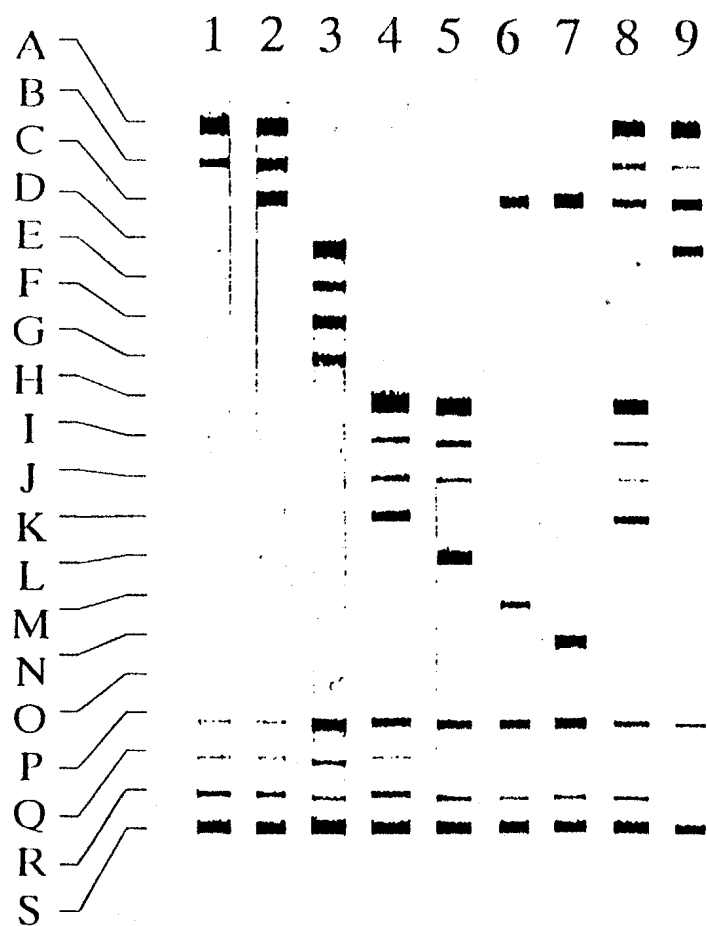


FIG. 3

Iso- late	Type	Accession number ref.									
		-240	-230	-220	-180	-170	-160	-150	-140		
HCV-1	1a	GAGTGTGTCAGCCTCCAGGACCC*AGTACACCGGAATTGCCAGGACCGGGTCTTTC..TTGGATC.AA								1	
HCV-J	1b	-----T-----		*						2	
BE82	1b	-----		*							
BE90	1b	-----T-----		T							
										28	SEQ ID NO 61 SEQ ID NO 62
HC-J6	2a	-----A-----C-----G--A--T-----A--		*						3	
HC-J8	2b	-----A-----C-----A--G-A-A--T-----A--		*						4	
BE91	2b	-----A-----C-----G-A-A--T-----A--		*							SEQ ID NO 63
										32	
BE92	2C	-----A-----C-----A--T-----A--		*							SEQ ID NO 64
										33	
BR56	3a	-----C-----C--TG--GT-----G--		*						5	
BE93	3a	-----C-----C--TG--GT-----G--		*							SEQ ID NO 65
BE94	3a	-----C-----C--TG--GT-----G--		*							SEQ ID NO 66
HCV-TR	3b	-----C-----C--G--T-----A--		*						6	
BE98	3C	-----C-----C--G--TT-----A--T--		*							SEQ ID NO 80
										54	

FIG. 4A-1

Iso- late	Type	Accession number ref.						
		-240	-230	-220	-180	-170	-160	-150
GB48	4a	↓	↓	↓	↓	↓	↓	↓
GB116	4a	↓	↓	↓	↓	↓	↓	↓
GB569	4a	↓	↓	↓	↓	↓	↓	↓
GB358	4a	↓	↓	↓	↓	↓	↓	↓
		37	38					
Z1	4b	↓	↓	↓	↓	↓	↓	↓
CAM600	4c	↓	↓	↓	↓	↓	↓	↓
CAM736	4c	↓	↓	↓	↓	↓	↓	↓
GB809	4c	↓	↓	↓	↓	↓	↓	↓
Z4	4c	↓	↓	↓	↓	↓	↓	↓
DK13	4d	↓	↓	↓	↓	↓	↓	↓
GB549	4e	↓	↓	↓	↓	↓	↓	↓
GB438	4f	↓	↓	↓	↓	↓	↓	↓
GB724	4g	↓	↓	↓	↓	↓	↓	↓
BE97	4g	↓	↓	↓	↓	↓	↓	↓
GB487	4h	↓	↓	↓	↓	↓	↓	↓

SEQ ID NO 67
SEQ ID NO 68
SEQ ID NO 69
SEQ ID NO 70

SEQ ID NO 72
SEQ ID NO 73
SEQ ID NO 74

SEQ ID NO 71

SEQ ID NO 81

SEQ ID NO 76

SEQ ID NO 77

SEQ ID NO 75

FIG. 4A-2

Iso- late	Type	Accession number ref.							
		-240	-230	-220	-180	-170	-160	-150	-140
		↓	↓	↓	↓	↓	↓	↓	↓
SA1	5a	---	AA---	*	---	G-T	---	A.	7
BE95	5a	---	AA---	*	---	G-T	---	T.	---
				44			45		
BE96	5a	---	AA---	*	---	G	---	A.	---
							47		
HK1	6a	---	A---	C	*	---	T	CA	8
								48	
HK2	6?	---	A---	C	*	---	T	CA	A

SEQ ID NO 78

SEQ ID NO 79

FIG. 4A-3

Isolate	Type	-130	-120	-110	-100	-90	-80	-70	Accession number reference
HCV-1	1a	↓	↓	↓	↓	↓	↓	↓	1 CCCGCTCAATGCCTGGAGATTGGCGTGCCCGCAAGACTGCTAGCCGAGTAGTGTGGTGGCGGA 31
HCV-J	1b	---	---	---	---	---	---	---	2
BE82	1b	---	---	---	---	---	---	---	---
BE90	1b	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	30
HC-J6	2a	---	---	---	---	---	---	---	3
HC-J8	2b	---	---	---	---	---	---	---	4
BE91	2b	---	---	---	---	---	---	---	---
BE92	2c	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	34
BR56	3a	---	---	---	---	---	---	---	5
BE93	3a	---	---	---	---	---	---	---	---
BE94	3a	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	35
HCV-TR	3b	---	---	---	---	---	---	---	6

FIG. 4B-1

Isolate	Type	-130	-120	-110	-100	-90	-80	-70	Accession number reference
GB48	4a	---	C--A-	---	---	---	---	---	
GB116	4a	---	C--A-	---	---	---	---	---	
GB569	4a	---	C--A-	---	---	---	---	---	
GB358	4a	---	C--A-	---	---	---	---	---	
GB549	4e	---	C--CA-	---	---	---	---	---	
CAM600	4c	---	TC--A-	---	---	---	---	---	
CAM736	4c	---	TC--A-	---	---	---	---	---	
GB809	4c	---	TC--A-	---	---	C-	---	---	
GB487	4h	---	---	A-	---	---	---	---	
GB724	4g	---	---	A-	---	---	---	---	
BE97	4g	---	---	A-	---	---	---	---	
SAL	5a	---	C--	---	G-	---	---	---	7
BE96	5a	---	C--	---	G-	---	---	---	
BE95	5a	---	C--	---	G-	---	---	---	
HK1	6a	---	---	---	---	---	---	---	8
BE98	3c	---	C--A-	---	G-	---	---	---	
GB438	4f	---	C--A-	---	G-	---	---	---	

FIG. 4B-2

HCV-1 STVTESDIRTEEAIYQCCDLPQARVAIKSLTERLYVGGPLTNSRGNGCYRRCRASGVLTTSCGNTLTCTYIKARAACRAAGLQDCTMLVCGDDLWICE
 HC-J1 -----R-----R-----
 HCV-H -----R-----
 HCV-J -----R-----L-T-----K-----N-----
 HCV-JK1 -----V-S-----A-E-Q-R-----K-Q-----I-----N-----L-S-----K-----
 HCV-CHINA -----V-S-----A-E-R-----I-----K-Q-----L-S-----K-----N-----
 HCV-T -----V-S-----A-E-Q-R-----I-----K-Q-----L-S-----K-----
 HC-J4.91 -----V-S-----A-E-Q-R-----I-----K-Q-----L-T-----K-----N-----
 HCV-TA -----V-S-----A-E-Q-----I-----K-Q-----L-T-----K-----N-----
 HCV-JT -----V-S-----A-E-Q-----I-----K-Q-----L-T-----K-----N-----
 HCV-BK -----V-S-----A-E-Q-----I-----K-Q-----L-S-----K-----N-----
 BE90 -----V-S-----A-E-Q-----I-----K-Q-----L-S-----K-----
 HC-J6 -----S-RA-S-PEE-HT-H-----MF-K-QT-----M-I-V-L-K-IIAP-----S-----
 HC-J8 -----S-A-S-PQE-TV-H-----M-K-QS-----F-M-M-L-K-IV-PV-----S-----
 BE91 -----S-A-S-PQE-TV-H-----MI-K-QS-----F-M-M-L-K-IV-PV-----S-----
 BE92 -----S-LA-S-PE-T-H-----ML-K-QT-----F-M-I-V-Q-K-IIAP-----S-----
 T1 -----Q-V-E-----N-E-E-RV-S-----C-MF-K-AQ-----P-F-I-T-AK-----RNPDF-----VA-----
 T7 -----Q-V-E-----N-E-E-KV-S-----C-MY-K-VQ-----P-F-I-T-A-----RNPDF-----VA-----
 BE93 -----Q-V-E-----N-E-E-KV-S-----C-MF-K-AQ-----P-F-I-TT-AK-----RNPDF-----VA-----
 T9 -----H-----E-E-K-SA-----I-MY-K-LQ-----P-F-I-T-S-----K-PSF-----VS-----
 T10 -----Q-----E-E-K-SA-----I-MY-K-LQ-----P-F-I-T-S-----K-PSF-----VS-----
 GB48 -----K-V-EV-----E-E-K-TA-----MH-K-DL-----Y-F-L-S-IK-R-----A-----
 GB116 -----K-V-EV-----E-E-R-TA-----MH-----DL-----Y-F-L-S-I-----R-----A-----
 GB215 -----K-V-EV-----E-E-KV-TA-----MH-K-DL-----Y-F-L-S-I-S-R-----Y-----A-----
 GB358 -----K-V-EV-----E-E-K-TA-----MH-K-DL-----Y-F-L-S-I-----R-----A-----
 GB549 -----R-----E-E-KV-SA-----MY-K-DL-Q-----Y-F-V-L-V-T-----KG-S-----
 GB809 -----R-KV-EV-----E-E-KV-AA-----MH-K-DL-----Y-F-M-L-S-I-----K-----A-----
 BE95 -----H-M-S-----S-Q-E-A-R-Q-----C-MY-K-QQ-----F-M-M-L-S-R-R-----L-----A-----
 CHR18 -----H-M-S-----S-LY-Q-E-R-Q-----C-MY-K-QQ-----F-M-M-L-S-K-----L-----A-----

FIG. 5A

	101	SEQ ID NO
HCV-1	SAGVQEDAASLRA	
HC-J1	-----	
HCV-H	-----	
HCV-J	---T-----A---	
HCV-JK1	---T-----V	
HCV-CHINA	---T-----V	
HCV-T	---T-----V	
HC-J4.91	---T-----A---	
HCV-TA	---T-----V	
HCV-JT	---T-----V	
HCV-BK	---T-----V	
BE90	---T-----V	82
HC-J6	-Q-TE--ERN---	
HC-J8	-Q-NE--ERN---	
BE91	-Q-NE--ERN---	83
BE92	-Q-TE--ERN---	84
T1	-D--D--R-A---	
T7	-D--D--RTA---	
BE93	-D--D--R-A---	85
T9	-C--E--R-A---	
T10	-C--E--R-A---	
GB48	-D--E--KRP-G-	86
GB116	-D--E--KRA-G-	87
GB215	-D--E--KRA-GV	88
GB358	-D--E--KRA-G-	89
GB549	-G--E--RA---	90
GB809	-G--E--KRA-G-	91
BE95	-Q-TH--E-----	92
CHR18	-Q-TH--K-----	

FIG. 5B

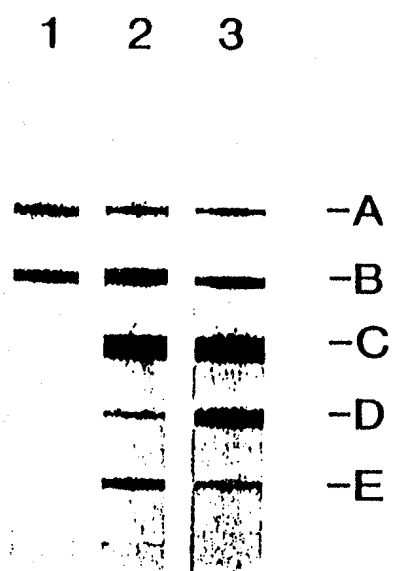


FIG. 6



FIG. 7

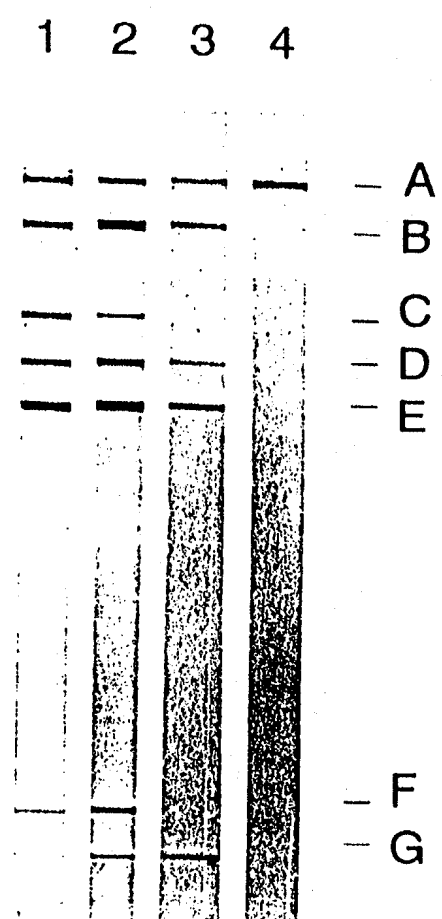


FIG. 8

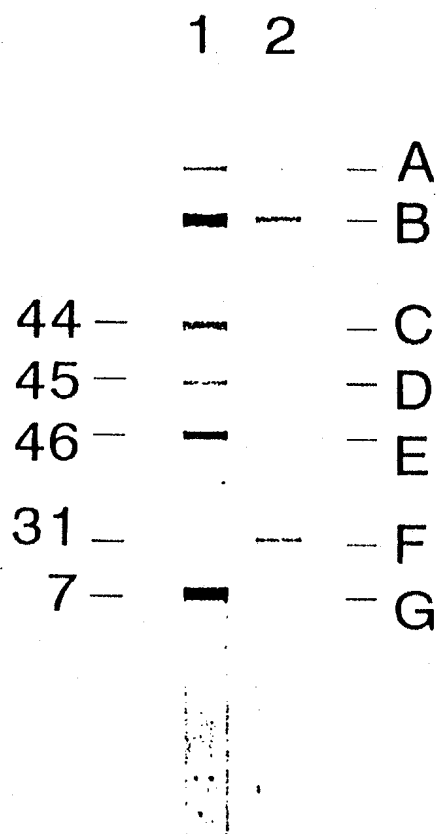


FIG. 9

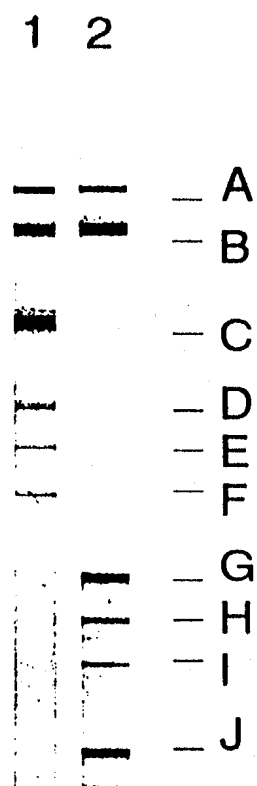


FIG. 10